DOCUMENT RESUME

ED 169 510 CS 004 777

AUTHOR Montferrante, Esther Reese
TITLE Do the Effects of Testwiseness Relate More to the Achievement of Remedial, Developmental, or Advanced Readers?
PUB DATE May 79
NOTE 24p.; M.A. Thesis, Kean College of New Jersey

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Elementary Education; Elementary School Students; Grade 6; *Problem Solving; *Reading Ability; *Reading Instruction; Reading Research; Reading Skills; Study Skills; *Test Wiseness

ABSTRACT

This study investigated the effects of instruction and practice in test-taking techniques upon the standardized reading scores of 7 remedial, 19 developmental, and 9 advanced reading students in the sixth grade. "The Nelson Reading Test (Revised Edition), Form A" served as a pretest. Both constructed and commercial materials were used to instruct the students for 20 25-minute periods. At the end of four weeks, "The Nelson Reading Test (Revised Edition), Form B" was administered. The data indicated that the improvement in standardized reading test scores for the remedial, developmental, and advanced readers was not statistically different. The study does provide evidence, however, that all groups did benefit from testwiseness instruction. (Author/RL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED169510

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

DO THE EFFECTS OF TESTWISENESS RELATE MORE TO THE ACHIEVEMENT OF REMEDIAL, DEVELOPMENTAL, OR ADVANCED READERS?

by

Esther Reese Montferrante

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Esther Reese Montferrante

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Presented in partial fulfillment
of the requirements for the degree of
Master of Arts
Kean College of New Jersey
May, 1979

CS804777

ABSTRACT

This study investigates the effects of instruction and practice in test-taking techniques upon the standardized reading scores of remedial, developmental, and advanced readers. The Nelson Reading Test (Revised Edition), Form A served as a pre-test. Materials, both constructed and commercial, were used to instruct the subjects for twenty twenty-five minute periods. At the end of four weeks, The Nelson Reading Test (Revised Edition), Form B was administered. The data from this investigation demonstrated that the improvement in standardized reading test scores for remedial, developmental, and advanced readers was not statistically different. The study does provide evidence, however, that all groups did benefit from instruction in testwiseness.

TABLE OF CONTENTS

Page

ABSTRACT ii

LIST OF TABLES iv

INTRODUCTION 1

HYPOTHESIS 3

DEFINITIONS 4

ASSUMPTIONS AND LIMITATIONS 4

PROCEDURES 6

RESULTS 12

CONCLUSIONS 15

SPECIFIC REFERENCES CITED 16

RELATED LITERATURE ON TESTWISENESS 17

REFERENCES CITED 40

APPENDIXES

A. TEST RESULTS - REMEDIAL READERS 45

B. TEST RESULTS - DEVELOPMENTAL READERS 46

C. TEST RESULTS - ADVANCED READERS 47

TABLES

Table		Page
1.	Mean Achievement in Pre and Post Tests for Remedial, Developmental, and Advanced Readers	12
2.	Mean Difference Between Pre and Post Test Results of Developmental and Advanced Readers	13
3.	Mean Difference Between Pre and Post Test Results of Remedial and Developmental Readers	14
4.	Mean Difference Between Pre and Post Test Results of Remedial and Advanced Readers	14

In a series of studies dating as early as 1921, Rugg and Colloton indicated that a rise on the Stanford Binet score was possible after practice and/ or coaching with similar material. Today, testwise has become a widely recognized area of study relating to the testing procedure.

Ebel and Damrin (1960) defined testwiseness as a specific cognitive skill that can be developed through experience. Ebel (1965) showed concern over excessive instruction on test-taking skills which help some people score well on a test for which they are unprepared. He explained that some more error in measurement is likely to result from students who have too little rather than too much skill in test taking.

The principles of testwiseness have been divided into two major categories by Millman, Bishop, and Ebel (1965). The first category contains elements which are independent of test constructor or test purpose. These principles would be valid in all testing situations regardless of previous contact with the test conductor or similar tests. Millman, Bishop, and Ebel list the principles, included in the first category as time using strategies, and deductive reasoning strategies.

The second category contains elements which are dependent upon the test constructor and his/ her test purpose. These include strategies which are valuable after gaining knowledge of the test constructor or test purpose,

or having had feedback or experience from similar tests. These elements are indentified as intent-consideration strategies and cue-using strategies.

Testwiseness studies have been completed on subjects from pre-school age to college. Oakland (1972) found that Head Start students who had received testwiseness instruction scored significantly higher than a control group on The Metropolitan Reading Test.

Callenbach (1971) found that second grade students who received instruction in test-taking techniques achieved significantly higher scores on standardized reading tests.

Studies on middle grade students (Caine and Jongsma, 1974) showed that test-taking instruction administered prior to a standardized reading test resulted in significantly higher scores for the experimental group.

The results of a study in testwiseness on urban high school students (McPhail, 1976) suggested that there were several patterns of improvement in the group of students who received testwiseness instruction.

Working with college students, Moore (1971) found that significantly higher mean scores were obtained by an experimental group on a test of analogies after instruction was given which familiarized the college students with question formats and types of analogies.

Test-taking is an important factor in American schools, and test results are being used to select group-

ings, diagnose problems, and assess student achievement. With the possibility of teacher accountability for students' achievement, tests are being examined more closely than in past years. Educators, parents, and the general public are asking, "Are our tests a fair measure of a student's achievement?" Research has shown that training in testwiseness techniques can alter test results. Students that are not testwise are at a disadvantage. Are students that are academically disadvantaged being penalized further on tests because of a lack of instruction in testwiseness skills? If so, it would appear desirable that training in testwiseness be provided so that such an unfair advantage is eliminated.

Hypothesis

To provide additional evidence in the area of testwiseness a study was conducted to determine the effects of testwiseness as related to the achievement of remedial, developmental and advanced readers. It was hypothesized that the effects of testwiseness relate more to the achievement of remedial readers than to developmental or advanced readers. It is assumed that remedial readers have not developed, independent of instruction, the adequate knowledge to use this appropriately.

Definitions

Remedial reader is defined as a child that is reading two or more years below his actual grade placement. A developmental reader is defined as a child that is reading no more than six months above or below his actual grade placement. An advanced reader is defined as a child that is reading one or more years above his actual grade placement.

Testwiseness is defined as a subject's capacity to utilize the characteristics and formats of the test and/or the test-taking situation to receive a high score. Testwiseness is independent of the subject's knowledge of subject matter. Millman, et al (1965).

Achievement Test is defined as a test designed to measure the results of learning or teaching, as contrasted with tests of native ability or aptitude.

Assumptions and Limitations

It is assumed by the researcher that the students will respond favorably to instruction in testwiseness and that test-taking will be improved by students at all levels.

The findings of this study are limited due to the presumption of the presence of the Hawthorne effect on the post-test, in that all students were aware that they were participating in an experiment. A higher grade on the post-test may also be due to normal academic growth. The study is further limited by the limited amount of time available

for testwiseness instruction. The Nelson Reading Test Revised Edition (1962) was used for pre and post-testing. Since a wide range achievement test was used for pre and post-tests, the results obtained may not be as accurate as a test of shorter range.

PROCEDURES

The study in testwiseness was completed in a small suburban working class town. Testwiseness instruction was administered during a regular sixth grade reading class period. The study involved 7 remedial readers, 19 developmental readers, and 9 advanced readers.

Prior to the instruction in testwiseness, a pre-test was administered to determine the reading level of the subjects. The Nelson Reading Test (Revised Edition) Form A was used for the pre-test. The test contained 175 items, 100 items to measure vocabulary, and 75 items to measure reading comprehension.

The Nelson Reading Test, designed for use in grades three through nine, was administered in a single class period. The subjects used a self-marking answer key, on which to record their responses.

The subjects were instructed in testwiseness for twenty sessions, each session lasting approximately 25 minutes.

A testwise comic booklet titled "Taking Tests" published by King Features was used to introduce subjects to the idea of testwiseness. Popeye, the main character throughout the comic, helped the subjects realize that the proper test-taking attitude will help them to do better on tests. Subjects were advised to study for tests in short

study sessions about 15-30 minutes in length. Proper health habits that affect test performance were discussed. These included adequate sleep, exercise, and proper food. The comic strip character, Popeye, stressed the following points: 1 - Look at the entire test before starting, and answer the easy questions first. (It was discussed that this was not always possible, as in the case when taking a standardized test.) 2 - When answering multiple choice questions eliminate the obviously wrong answers before deciding on a correct one. 3 - When answering essay questions organize your facts before you begin to write. 4 - Don't panic during a test, if your mind goes blank, think about something else for about 30 seconds, then begin the test again.

A teacher-made testwise instructional booklet was constructed using testwise concepts developed by W. George Gaines and Eugene A. Jongsma, at the Louisiana State University at New Orleans. The booklet, utilized for instruction included the following:

1 - Motivation for taking tests. Wanting to do well on a test helps students to do well. Various types of motivation were discussed. Subjects were instructed to try and remain motivated throughout a test, even if it seemed like they did not know many of the answers. A "Keep trying" attitude would usually pay off.

2 - The importance of following directions when taking a test as directed is especially important when taking tests. Subjects were instructed to read all directions carefully. Reading directions slowly was stressed and practiced using various materials. Several tests were given to give subjects practice in following exactly what the directions said. Subjects were also instructed to go back and reread directions if they were unsure about what to do or, if after beginning to work, they found something was not right. Subjects were also given brief multiple choice test without any directions to allow them to see what a handicap it was taking a test without any directions.

3 - Understanding what was read on a test was another emphasis. Subjects were instructed to be sure to read questions carefully, to be sure they knew what question was being asked. Subjects had practice in looking for important words like only, always, all, never, which mean "with no exceptions", and words like most, generally, and may indicating that some exceptions were possible.

4 - Subjects were taught the differnce between being a wild guesser and a eliminator. Practice was given, using multiple choice questions, in the area of eliminating answers that couldn't possibly be correct. Subjects were taught the advantages of choosing an answer out of three possibilities as opposed to five.

5 - The importance of filling out an answer sheet correctly was taught using a discarded standardized test answer sheet similar to that used in The Nelson Reading Test. Marking answers correctly was practiced. Subjects were cautioned to be sure which way the numbers on an answer sheet went. (Right to Left or Top to Bottom.) Subjects were instructed to be sure to always keep their place on an answer sheet. Checking to make sure that marks were in the right place if an item was skipped, was practiced.

6 - The concept of time during a test was discussed as an important factor in test-taking skills. Subjects were instructed not to work too fast, as they might make careless errors. They were also instructed not to work too slow so they would have enough time to complete the test. Various timed tests were administered during which the amount of time remaining was written on the chalk board. Students who worked too slowly were instructed to work a little faster, and students who worked very quickly were advised to take their time and be more careful. While working, subjects were advised to glance at the chalk board to see how much time they had left. If there was only one minute left and the subjects had many more problems to complete, they were instructed to skim over the remaining problems and to answer the easier ones or ones they were sure of.

7 - Conduct during a test was discussed. It was stressed that when finished with a test it was important to be considerate of others who were still working. Keeping a trade book handy, a scrap of paper to draw on, or going back to be sure you have completed all the items intended, were possible suggestions that were given to help keep subjects occupied so as not to disturb others.

Each area of testwiseness was reviewed briefly each day at the beginning of each session of new instruction. This was done to keep subjects aware of all areas that were taught through constant review. Vocabulary and comprehension work for reading class was set up in the same style as the items that were listed on the Nelson Reading Test. This allowed subjects to become familiar with the test format.

A post-test was administered two days after the final instruction session. The Nelson Reading Test (Revised Edition) Form B was utilized at this time to determine progress.

Minimal instruction in reading was given during the four week period of the study. Since pre and post tests were given so close together, there was no need for a control group to determine if reading achievement gains were made because of the instruction in testwiseness or because of instruction in reading comprehension and vocab-

ulary. The study may be contaminated by the fact that there was no control group.

RESULTS

Pre and post grade equivalent scores for the standardized test were compared for the remedial, developmental, and the advanced reading groups. After examining the mean of the pre and post test scores for each group, it would seem that the testwiseness instruction improved the performance on the standardized test for each of the three reading groups.

TABLE I

MEAN ACHIEVEMENT IN PRE AND POST TESTS FOR REMEDIAL, DEVELOPMENTAL AND ADVANCED READERS

	Mean pre-test	Mean post-test	Mean achievement
Remedial	3.68	4.72	1.04
Developmental	6.20	7.40	1.20
Advanced	8.07	9.41	1.34

The mean difference (gain) between the pre and post test results of these gains were compared to each other to determine their significance. When the developmental and advanced reading group scores were compared, as shown in Table II, a t of -.43 resulted. A comparison of the remedial and developmental group reading scores, as shown in Table III, resulted in a t of .71. Further comparison of the remedial and advanced reading groups, noted in Table IV, resulted in a t of .34. The t test values for all three comparisons showed statistically insignificant achievement differences in reading as a result of the instruction in testwiseness.

TABLE II

MEAN DIFFERENCE BETWEEN PRE AND POST TEST RESULTS OF DEVELOPMENTAL AND ADVANCED READERS

	Mean	S.D.	T
Developmental	1.1	1.16	-.43
Advanced	1.3	.97	

TABLE III

MEAN DIFFERENCE BETWEEN PRE AND POST TEST RESULTS OF REMEDIAL AND DEVELOPMENTAL READERS

	Mean	S.D.	T
Remedial	1.6	2.25	.71
Developmental	1.1	1.16	

TABLE IV

MEAN DIFFERENCE BETWEEN PRE AND POST TEST RESULTS OF REMEDIAL AND ADVANCED READERS

	Mean	S.D.	T
Remedial	1.6	2.25	.34
Advanced	1.3	.97	

CONCLUSIONS

The data from this investigation demonstrated that the improvement in standardized reading test scores for remedial, developmental, and advanced readers was not statistically different. The study does provide evidence; however, that all groups did benefit from instruction in testwiseness. Since advanced groups made greater gains on the post test than the remedial or developmental groups, the hypothesis was therefore rejected.

Since only four weeks of instruction time separated the pre test from the post test, and reading instruction was quite limited, due to the instruction in testwiseness, the change in pre and post test scores seems to have occured as a result of instruction in testwiseness. The study does provide evidence that testwiseness skills can be learned through instruction and practice. It would appear advantagious to acquaint all students with the techniques in testwiseness. The objective of testwiseness instruction would be to decrease the handicap under which many students apparently operate.

SPECIFIC REFERENCES CITED

Callenbach, C.A. The Effects of Instruction and Practice in Non-substantive Test-Taking Techniques Upon the Standardized Reading Test Scores of Selected Second Grade Students. Upublished doctoral dissertation, Pennsylvania State University, 1971.

Ebel, R.L. and Damrin, D.E. Tests and examinations. In C.W. Harris (Ed.) Encyclopedia of Educational Research, 1960, 1502-1517.

Gaines, G. and Jongsma, E. The effect of training in test-taking skills on the achievement scores of fifth grade pupils. Paper presented at the annual meeting of the National Council on Measurement in Education, Chicago, 1974.

McPhail, I.P., A Psycholinguistic Approach to Training Urban High School Students in Test-Taking Strategies: A Directional Effort. Morgan State University, 1976.

Millman, J., Bishop, C.H., and Ebel, R. An analysis of test-wiseness. Educational and Psychological Measurement. 1965, 25, 707-26.

Moore, J.C. Testwiseness and analogy test performance. Measurement and Evaluation in Guidance, 1971, 3, 198-202.

Oakland, T. The effects of test-wiseness materials on standardized test performance of preschool disadvantaged children. Journal of School Psychology, 1972, 10, 355-360.

Rugg, H. and Colloton, C. Constancy of the Stanford-Binet I.Q. as Shown by Retests. Journal of Educational Psychology XII, 1921, 315-21.

APPENDIX

APPENDIX A Pre and Post Test Results of Remedial Readers

Pre-test	Post-test	Gain
-2.0	5.0	7.0
3.5	4.7	1.2
3.8	4.8	1.0
3.9	5.0	1.1
4.0	3.6	-.4
4.2	4.8	.6
4.4	5.2	.8
E= 25.8	33.1	
M= 3.68		

APPENDIX B Pre and Post Test Results of Developmental Readers

Pre-test	Post-test	Gain
5.8	5.1	-.7
5.9	6.9	1.0
5.9	5.3	-.6
5.9	7.8	1.9
6.0	6.2	.2
6.0	9.4	3.4
6.0	6.1	.1
6.2	8.5	2.3
6.2	8.2	2.0
6.2	7.1	.9
6.3	6.8	.5
6.5	7.9	1.4
6.5	9.1	2.6
6.6	6.5	-.1
6.6	8.1	1.5
6.7	8.8	2.1
7.0	9.4	2.4
7.0	8.0	1.0
E= 119.2	140.7	
M= 6.2	7.4	

APPENDIX C Pre and Post Test Results for Advanced Readers

Pre-test	Post-test	Gain
9.4	10.5	1.4
9.0	8.5	-.5
8.2	8.8	.6
7.9	10.2	2.3
8.0	10.0	2.0
8.0	9.0	1.0
7.5	8.2	.7
7.5	10.3	2.8
7.2	9.2	2.0
E= 72.7	84.7	
M= 8.07	9.41	